

I CLAIM:

1. A suture needle and suture assembly, said assembly comprising a suture needle
and suture:
5 said suture needle comprising a curvilinear, substantially arched shaft tapering at the
ends thereof to form two tips for impalement of tissue;
a groove being provided on the needle approximately equally remotely located
from the said tips and running along the length thereof for substantially housing
the suture;
10 a hole provided from the bottom of the groove cavity and extending through to the
opposite surface of the shaft for securing the suture.
2. An assembly according to claim 1, wherein said suture is secured through the hole
by a means for fastening, the means for fastening being a crimp or a plug.
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3. An assembly according to claim 1, wherein the said groove is on either the inner
or on the outer surface of the needle.
4. An assembly according to claim 1, wherein the hole is provided substantially
20 through the center of the groove.
5. An assembly according to claim 1, wherein said suture comprises of a section
having a diameter appropriate to the diameter of the needle and a narrower section.
- 25 6. An assembly according to claim 5, wherein the narrower section may be
integrally formed with the suture or separately provided, the separately provided narrow
section being attached at an end of the regular suture.
7. An assembly according to claim 6, wherein the fastening means is provided on
30 one end of the narrow section.

8. An assembly according to claim 5, wherein the cavity formed by the groove is sufficient only to house the suture having a diameter appropriate to the diameter of the needle, or the narrower section.
- 5 9. An assembly according to claim 5, wherein the narrow end of the suture is housed in the groove, the length of the narrow section being at least one half of the length of the groove.
- 10 10. An assembly according to claim 1, wherein the hole comprises of two coaxially aligned hollow cylindrical cavities with differing diameters.
11. An assembly according to claim 10, wherein the cylindrical cavity with smaller diameter terminates at the bottom of the groove, said diameter being equal to or greater than the diameter of the suture to enable threading.
- 15 12. An assembly according to claim 10, wherein the form of the crimp or plug remains in the cylindrical cavity with larger diameter so as to provide the profile of the needle surface for impalement of tissue.
- 20 13. An assembly according to claim 1, wherein the crimp or the plug is circular with a diameter substantially equal to the diameter of the cylindrical cavity with larger diameter so as to enable resilient fastening.
- 25 14. An assembly according to claim 1, wherein sum of the width of the suture running along the body of the needle and out of the groove is lesser than or equal to the diameter of the shaft at its widest.
- 30 15. An assembly according to claim 1, wherein the width of the groove is lesser than, approximately one-third, the diameter of the shaft of the suture needle at its widest.

16. An assembly according to claim 1, wherein the suture needle is a cylindrical shaft having a uniform diameter.
17. An assembly according to claim 1, wherein the suture needle is composed of titanium.
18. An assembly according to claim 1, wherein the groove recess is provided at such distance from the tip of the suture needle where the diameter of the tapering end is equal to the diameter of narrow suture;
- said groove recess gradually deepening at a gradient so that the thickness of the solid portion of the needle is equal to or greater than the thickness at the point of commencement of the groove.